

JUnit Basic Testing Exercises

Exercise 4: Arrange-Act-Assert (AAA) Pattern, Test Fixtures, Setup and Teardown Methods in JUnit

Scenario: You need to organize your tests using the Arrange-Act-Assert (AAA) pattern and use setup and teardown methods.

Steps:

1. Write tests using the AAA pattern.
2. Use @Before and @After annotations for setup and teardown methods.

I have written a class called Calculator.java

```
1 package com.example;
2
3 public class Calculator {
4     public int add(int a,int b) {
5         return a+b;
6     }
7     public int subtract(int a,int b) {
8         return a-b;
9     }
10 }
11 }
12
```

I have written another class called CalculatorTest.java

```
1 package com.example;
2 import org.junit.After;
3 import org.junit.Before;
4 import org.junit.Test;
5 import static org.junit.Assert.*;
6
7 public class CalculatorTest {
8     private Calculator calculator;
9
10    @Before
11    public void setUp() {
12        System.out.println("Setting up...");
13        calculator = new Calculator();
14    }
15
16    @After
17    public void tearDown() {
18        System.out.println("Tearing down...");
19        calculator = null;
20    }
21
22    @Test
23    public void testAdd() {
24        int result = calculator.add(2, 3);
25        assertEquals(5, result);
26    }
27
28    @Test
29    public void testSubtract() {
30        int result = calculator.subtract(10, 4);
31        assertEquals(6, result);
32    }
33 }
```

Output console

```
Setting up...
Tearing down...
Setting up...
Tearing down...
```